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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,330	07/10/2003	David Richard Amick	A01396	2827
21898	7590	02/01/2005	EXAMINER	
ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			SASTRI, SATYA B	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/617,330

**Applicant(s)**

AMICK ET AL.

**Examiner**

Satya B Sastri

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/6/03, 3/1/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. This office action is in response to application filed on July 10, 2003. *Claims 1-10* are now pending in the application.

### ***Information Disclosure Statement***

2. It is noted that US application numbers 09/981,349, 09/978,920 and 09/965,438 cited on information disclosure statement (IDS) dated 10/6/04 matured into US 6,545,084, US 6,524,656 and US 6,696,518, respectively. Therefore, these application numbers have been struck off from the IDS and the corresponding US patent has been cited on form PTO-892.

### ***Claim Rejections - 35 USC § 102 and 103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. *Claims 1, 4, 6, 9* are rejected under 35 U.S.C. 102(b) as anticipated by Holy et al. (US 5,268,437).

Prior art to Holy et al. discloses an aqueous process for the polymerization of unsaturated carboxylic monomers. Suitable monomers include acrylic acid, methacrylic acid, maleic acid, maleic anhydride, crotonic acid etc. (abstract). The process includes an initiator or an aqueous solution thereof in an effective amount for initiating free radical polymerization of monomers (column 4, lines 29-42). The process may include up to 20% by weight of carboxyl-free monomers (column 5, lines 24-47). Suitable free radical initiators disclosed include t-amyl hydroperoxide which may be used in amounts ranging from 0.05 to 25 % by wt. based on the total weight of polymerizable monomer (column 5, line 50-66). The monomers are polymerized in aqueous solution (column 8, lines 7-8). Thus, *claims 1, 4, 6, 9* are anticipated by Holy et al. The instant claims disclose a genus of useful initiators while the prior art teaches a species of the claimed genus. A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus. The species anticipates the genus. *In re Slayter*, 276, F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); *In re Gosteli*, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

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6. **Claims 2, 3** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Holy et al. (US 5,268,437).

The prior art to Holy et al. is elaborated above in paragraph 5 and is incorporated herein by reference. The claims as written are in product-by-process format. The aqueous composition made by the process comprising the step of adding the initiator in batches includes a process limitation to which no patentable weight is to be given. Case law holds that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production.” See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113.

7. **Claims 7, 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Holy et al. (US 5,268,437).

The prior art to Holy et al. is elaborated above in paragraph 5 and is incorporated herein by reference.

The difference between the prior art and the present invention is that the present invention discloses a method with delayed addition of initiator after polymerizing 90 to 99.7 wt.% of monomers.

The prior art teaches that one common method of reducing the level of unreacted monomer in a polymer mixture is post-polymerization addition of one or more initiators. Generally, the level of initiators added to reduce is in the range of 0.1 to 2 mole % based on the

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total amount of polymer (column 8, lines 1-16). In light of such teachings on post-polymerization, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include appropriate amounts of initiator including amounts claimed instantly in the post polymerization process and thereby obtain the present invention.

8. *Claims 5, 10* are rejected under 35 U.S.C. 103(a) as being unpatentable over Holy et al. (US 5,268,437) in view of Jenkins et al. (US 5,401,802).

The prior art to Holy et al. is elaborated above in paragraph 5 and is incorporated herein by reference.

The difference between the prior art and the present invention is that the present invention discloses monomer copolymerizable with at least one ionic monomer to be a surfactant monomer.

The prior art to Jenkins et al. teaches that water-soluble monomers that are copolymerized with hydrophobic monomers covalently bound to the polymer provide for enhanced thickening of aqueous solutions containing the polymer and further aid in suspending particulate materials in non-aqueous systems (abstract). The prior art to Jenkins et al. is in an analogous field of production of water-soluble polymers. In light of advantages taught by Jenkins et al. of incorporating hydrophobic monomers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to copolymerize appropriate amounts of hydrophobic monomers that also act as surfactants with ionic monomers and thereby obtain the present invention.

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9. *Claims 1, 4, 6, 9* are rejected under 35 U.S.C. 102(e) as anticipated by Meffert et al. (US 6,552,142 B1).

The prior art to Meffert et al. teach a process for preparing an aqueous copolymer dispersion by free-radical polymerization of ethylenically unsaturated monomers in an aqueous solution in which from 10-90% by weight of at least one hydrophilic monomer and from 10 to 90% by weight of mono-ethylenically unsaturated hydrophobic monomer are copolymerized in the presence of a free-radical initiator (abstract). The process includes 0.01 to 20% by weight, based on the total monomers, of at least one water soluble or water-insoluble initiator or mixtures thereof (column 3, lines 15-19). The disclosure further teaches that 0.1 to 20% by weight of water soluble monomers such as those containing monocarboxylic and dicarboxylic acid groups, sulfonic acid group, monoesters of dicarboxylic acid etc. (column 5, lines 5-25). Suitable initiators include tert.-amyl peroxide which may be used alone or in combination with reducing agents (column 6, lines 30-43). Thus *claims 1, 4, 6, 9* are anticipated by Meffert et al. The instant claims disclose a genus of useful initiators while the prior art teaches a species of the claimed genus. A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus. The species anticipates the genus. *In re Slayter*, 276, F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); *In re Gosteli*, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

10. *Claims 2, 3* are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Meffert et al. (US 6,552,142 B1).

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The prior art to Meffert et al. is elaborated above in paragraph 9 and is incorporated herein by reference. The claims as written are in product-by-process format. The aqueous composition made by the process comprising the step of adding the initiator in batches includes a process limitation to which no patentable weight is to be given. Case law holds that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production.” See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113.

11. **Claims 7, 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meffert et al. (US 6,552,142 B1).

The prior art to Meffert et al. is elaborated above in paragraph 9 and is incorporated herein by reference.

The difference between the prior art and the present invention is that the present invention discloses delayed addition of initiator after polymerizing 90 to 99.7 wt.% of monomers.

The prior art teaches that the manner in which initiator is added to the polymerization mixture is not critical. It discloses that the initiator can be either included in its entirety in the initial charge or continuously or in stages during polymerization. The procedure adopted depends both on the chemical nature of the initiator and the polymerization temperature and can be chosen by the skilled worker depending on the requirements (column 7, lines 13-23). Therefore,



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it would have been obvious to one of ordinary skill in the art at the time the invention was made to include appropriate amounts of initiator including amounts claimed instantly in the post polymerization process and thereby obtain the present invention.

12. *Claims 1-4* are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Swarup et al. (US 5,703,155).

Swarup et al. disclose waterborne coating composition comprising a film forming resin and a non-gelled copolymer. The copolymer is prepared from 75 to about 95% by weight of an ethylenically unsaturated monomer, about 2 to 12% by weight of one acid-group containing monomer and 2-20% by weight of oligomeric monomer (column 3, lines 5-20). Suitable free radical initiators include di-tert. amyl peroxyacetate, tert. amyl peroxyacetate, di-tert. amyl peroxide etc. in amounts ranging from 2 to 10%, based on the total weight of the reactants (column 4, lines 36-41).

It is the examiner's position that the amount of initiators used in the polymerization affect the rate of polymerization and the molecular weight of the polymer. Since the instant claims are product by process claims wherein the product as claimed does not include any of the property that results from the process, *claims 1-4* are anticipated by, or in the alternative obvious over the prior art product. The instant claims disclose a genus of useful initiators while the prior art teaches a species of the claimed genus. A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus. The species anticipates the genus. *In re Slayter*, 276, F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); *In re Gosteli*, 872 F.2d

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1008, 10 USPQ2d 1614 (Fed. Cir. 1989). Additionally, the claims as written are in product-by-process format. The aqueous composition made by the process comprising the step of adding the initiator in batches includes a process limitation to which no patentable weight is to be given. Case law holds that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production.” See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113.

13. **Claims 1, 4, 6, 9** are rejected under 35 U.S.C. 102(b) as anticipated by Kirk et al. (US 5,597,509).

The disclosure of Kirk et al. relates to an aqueous process for preparing low molecular weight polymers. The polymer product is formed from 3-50% by wt. of at least one dicarboxylic acid monomer, 50-97% by weight of at least one monocarboxylic acid and 0-40% by wt. of carboxyl-free unsaturated monomer (abstract). Suitable water-soluble initiators disclosed include tert. amyl hydroperoxide in amounts of 0.5 to 25 wt.%, based on the total amount of monomer added (column 6, lines 50-67). **Claims 1, 4, 6, 9** are anticipated by Kirk et al. The instant claims disclose a genus of useful initiators while the prior art teaches a species of the claimed genus. A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus. The species anticipates the genus. *In re Slayter*, 276, F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); *In re Gosteli*, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

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14. *Claims 2, 3* are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kirk et al. (US 5,597,509).

The prior art to Kirk et al. is elaborated above in paragraph 13 and is incorporated herein by reference. The claims as written are in product-by-process format. The aqueous composition made by the process comprising the step of adding the initiator in batches includes a process limitation to which no patentable weight is to be given. Case law holds that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production.” See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113.

15. *Claims 7, 8* are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirk et al. (US 5,597,509).

The prior art to Kirk et al. is elaborated above in paragraph 13 and is incorporated herein by reference.

The difference between the prior art and the present invention is that the present invention discloses delayed addition of initiator after polymerizing 90 to 99.7 wt.% of monomers.

The prior art teaches that one common method of reducing the level of unreacted monomer in a polymer mixture is post-polymerization addition of one or more initiators (column

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8, lines 5-14). In light of such teachings on post-polymerization, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include appropriate amounts of initiator including amounts claimed instantly in the post polymerization process and thereby obtain the present

16. *Claims 5, 10* are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirk et al. (US 5,597,509) in view of Jenkins et al. (US 5,401,802).

The prior art to Kirk et al. is elaborated above in paragraph 13 and is incorporated herein by reference.

The difference between the prior art and the present invention is that the present invention discloses monomer copolymerizable with at least one ionic monomer to be a surfactant monomer.

The prior art to Jenkins et al. teaches that water-soluble monomers that are copolymerized with hydrophobic monomers covalently bound to the polymer provide for enhanced thickening of aqueous solutions containing the polymer and further aid in suspending particulate materials in non-aqueous systems (abstract). The prior art to Jenkins et al. is in an analogous field of production of water-soluble polymers. In light of advantages taught by Jenkins et al. of incorporating hydrophobic monomers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to copolymerize appropriate amounts of hydrophobic monomers that also act as surfactants with ionic monomers and thereby obtain the present invention.

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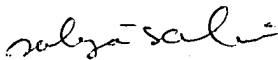
*Conclusion*

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 212 1112.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (571) 212 1114.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SATYA SASTRI

January 21, 2005

**TATYANA ZALUKAEVA**  
**PRIMARY EXAMINER**

